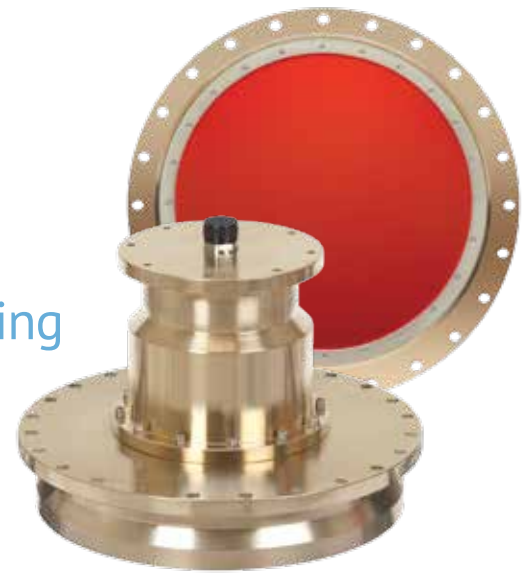


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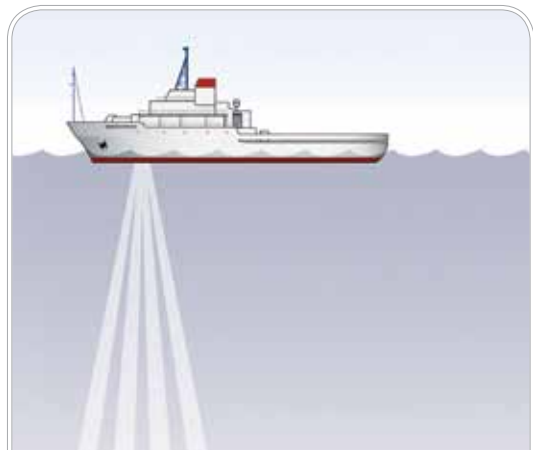
Ocean Surveyor

Vessel-Mount Long Range 3-D Current Profiling

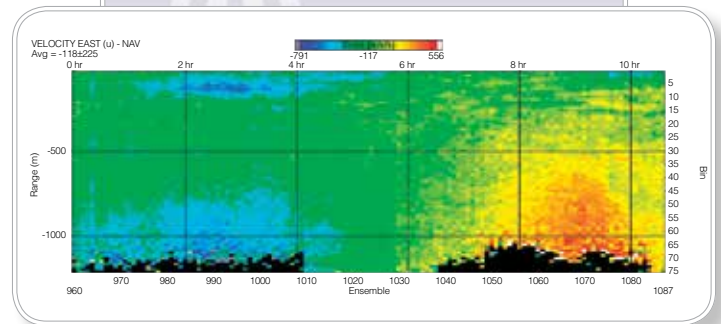
Explore New Depths with Proven ADCP Technology



For over thirty years, Teledyne RD Instruments has been the preeminent supplier of Acoustic Doppler Current Profiling (ADCP) instrumentation for open ocean applications. Teledyne RDI's vessel-mounted OCEAN SURVEYOR family of ADCPs are the only instruments capable of collecting detailed maps of the distribution of water currents and suspended materials through the water column and along the ship's path—at depths and resolutions previously considered unattainable. In real time, the ADCP is also used to aid in situ decision-making, to adapt field operations, and to understand current regime characteristics.



Frequency	Range (m)	Cell Size (m)
38kHz	>1000	24
75kHz	>700	16
150kHz	>400	8



PRODUCT FEATURES

- **Versatile:** Broadband signal processing combines with Narrowband processing to provide the ultimate in data versatility.
- **Compact:** Patented phased array transducers significantly reduce the transducer size and weight for ease of installation.
- **Comprehensive:** The Ocean Surveyor combines current profiling, backscatter profiling, and Doppler Velocity Log capability all within a single instrument.

- **Four-beam solution:** Patented phased array 4-beam design provides increased data reliability and quality assurance.

Applications:

- Climate studies
- Mid-ocean frontal mapping
- Fisheries research
- Deep-water cable-laying projects



Ocean Surveyor

Vessel-Mount Long Range 3-D Current Profiling



TECHNICAL SPECIFICATIONS

Water Profiling	Long Range Mode	38kHz	75kHz	150kHz	
	Vertical resolution cell size ¹	Max Range ²	Precision ³	Max Range ²	Precision ³
	4			>350m	30cm/s
	8		>650m	30cm/s	
	16	>1000m	30cm/s	>400m	16cm/s
	24	>1000m	20cm/s		
High Precision Mode	38kHz	75kHz	150kHz		
	Vertical resolution cell size ¹	Max Range ²	Precision ³	Max Range ²	Precision ³
	4			>225m	15cm/s
	8		<425m	15cm/s	
	16	>900m	15cm/s	>250m	8cm/s
	24	>950m	10cm/s		
Profile Parameters	Velocity accuracy (typical)	±1.0% ± 0.5cm/s	±1.0% ± 0.5cm/s	±1.0% ± 0.5cm/s	
	Velocity range	-5 to 9m/s	-5 to 9m/s	-5 to 9m/s	
	Number of depth cells	1-128	1-128	1-128	
	Maximum ping rate	0.4Hz	0.7Hz	1.5Hz	
Bottom Track	Max altitude (precision <2cm/s)	1700m	950m	540m	
	Range Accuracy = <±2% actual range ⁴				
Echo Intensity Profile	Vertical resolution	Depth cell size, user configurable			
	Dynamic range	80dB			
	Precision	±1.5dB			
Transducer and Hardware	Beam angle	30°			
	Configuration	4-beam, phased array			
	Communications	RS-232 or RS-422 hex-ASCII or binary output at 1200-115,200 baud			
System Power	AC input	90-250VAC, 47-63Hz			
	Power	1400W			
Software	Use TRDI's Windows™-based software for best results: VMDAS — Vessel-Mount Data Acquisition System; WinADCP —Data Display and Export				
Options	Velocity for advanced post processing				
Environmental	Operating temperature	-5° to 45°C			
	Storage temperature	-30° to 60°C			
Standard Sensors	Temperature (mounted on transducer)	Range -5° to 45°C, Precision ±0.1°C, Resolution 0.03°			
System Components	<ul style="list-style-type: none"> • 38, 75, or 150kHz transducer • 19" rack-mount electronic chassis • All-purpose deck box • Gyrocompass interface board • LCD gyro offset control display User to supply compass input or GPS navigation data and NMEA tilt information				
Dimensions	38kHz: 914.4mm dia.; 75kHz: 480mm dia.; 150kHz: 305mm dia. <i>(line drawings available upon request)</i>				

1. Ranges at 1 to 5 knots ship speed are typical and vary with situation.
 2. Single-ping standard deviation.
 3. User's choice of depth cell size is not limited to the typical values specified.
 4. Excludes errors introduced by changes in speed of sound profile, by tilting of transducer, and by slope of bottom.
 5. Up to ±20° tilt.

Specifications subject to change without notice.

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